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Calculus Distance Education Course Outline

GENERAL INFORMATION

Calculus 30 (There are three Distance Ed Calculus courses and so I refer to my section as Calculus 30_G)

i. Semester II , **11:15 am – 12:15 pm**, Feb. 3 – June 22, 2020, William Derby School - Strasbourg

ii. Instructor – Lorne Gottselig

iii. Contact information: School Phone (306) 725-3441, School Fax (306) 725-3629

Email: lorne.gottselig@hzsd.ca

Email is my preferred means of communication.

COURSE DESCRIPTION

Calculus 30 involves a study of limits, the derivative function with applications to problem solving and graphing and integration and its applications.

i. Prerequisite: Pre-Calculus 30 (Students can concurrently take this class and Pre-Calculus 30).

STUDENT LEARNING OUTCOMES:

The Calculus curriculum consists of the following eight outcomes:

C30.1 - Extend understanding of functions including: algebraic functions (polynomial, rational, power) transcendental functions (exponential, logarithmic, trigonometric) piecewise functions, including absolute value. (Feb 3 – Feb 14 : 10 days)

C30.2 - Extend understanding of factoring, absolute value, and solving inequalities to include: rational expressions double inequalities absolute value inequalities. (Feb 24 – Mar 11: 12 days)

C30.3 - Demonstrate understanding of limits and continuity. (Mar 12 – Apr 7 : 18 days)

C30.4 - Demonstrate understanding of differentiation based on slope as a rate of change. (Apr 8 – May 8 : 16 days)

C30.5 - Extend understanding of curve sketching by applying differentiation and limits. (May 11 – May 26 : 10 days)

C30.6 - Demonstrate understanding of the application of derivatives to solve problems including: optimization rates of change related rates. (May 27 – Jun 1 : 4 days)

C30.7 - Demonstrate understanding of transcendental function derivatives and their applications. (Jun 2 – Jun 9 : 6 days)

C30.8 - Demonstrate understanding of indefinite and definite integration: by sight by substitution as used in the Fundamental Theorem of Calculus. (Jun 10 – Jun 22 : 9 days)

TEACHING STRATEGIES:

i. The course will be delivered synchronously by Blackboard Collaborate and the entire course will be on the Division Moodle Server with copies of the notes and links to the recordings for any student who will be taking the course asynchronously.



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ii. Assignment due dates. Due dates will be flexible to allow DE students time to complete the work. There will be two fixed dates for submission of work (approx. one week prior to the exam). Students need to meet these two deadlines in order to have feedback before the exam

iii. Exam dates: Functions/Limits Exam (C30.1 – C30.3) – Apr 23 , Derivatives Exam (C30.4 – C30.7) – June 11

*** There will be no final exam for this course.**

COURSE MATERIALS

I. Textbook: Calculus 30 - Burt Thiessen , Globe Printers Ltd ISBN 0-9689314-2-1

II. Students should have a graphing calculator or access to a web based graphing utility

EVALUATION:

The evaluation plan for Calculus 30 is outlined below:

- ❖ 50 % - Assignments
- ❖ 20 % - Friday Work
- ❖ 30 % - * Midterm Exams (15% each)

* The “Derivatives” exam may be written during the exam week in June, however, there will be no recommends (exemptions) for this exam. I will consult with each school as to the date when this exam will be written.